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10/620,668	07/16/2003	Sandeep Lodha	RSTN-119	9563

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EXAMINER
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ART UNIT	PAPER NUMBER
2616	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

	Application No.	Applicant(s)
	10/620,668	LODHA, SANDEEP
Office Action Summary	Examiner	Art Unit	
	PAO SINKANTARAKORN	2616	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
  Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>29 April 2008</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>1,2,4-10 and 14-20</u> is/are pending in the application.

     4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>1, 2, 4-10, and 14-20</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.

     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

     a) ☐ All   b) ☐ Some * c) ☐ None of:

         1. ☐ Certified copies of the priority documents have been received.

         2. ☐ Certified copies of the priority documents have been received in Application No. _____.

         3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

     * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1.   Claims 1, 2, 4-10, and 14-20 are currently pending in the application.

Claim Rejections - 35 USC § 103

2.   This application currently names joint inventors. In considering patentability of

the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of

the various claims was commonly owned at the time any inventions covered therein

were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was

not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g)

prior art under 35 U.S.C. 103(a).

3.   The factual inquiries set forth in *Graham* v. *John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

    1.   Determining the scope and contents of the prior art.
    2.   Ascertaining the differences between the prior art and the claims at issue.
    3.   Resolving the level of ordinary skill in the pertinent art.
    4.   Considering objective evidence present in the application indicating
            obviousness or nonobviousness.

4.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

        (a) A patent may not be obtained though the invention is not identically disclosed or described as set
        forth in section 102 of this title, if the differences between the subject matter sought to be patented and
        the prior art are such that the subject matter as a whole would have been obvious at the time the
        invention was made to a person having ordinary skill in the art to which said invention pertains.
        Patentability shall not be negatived by the manner in which the invention was made.

5.   Claims 1, 2, 4-7, and 15-19 are rejected under 35 U.S.C. 103(a) as being

unpatentable over Bly et al. (US 2004/0042399) in view of Agrawal et al. (US

2003/0081546).

Regarding claims 1 and 15, Bly et al. disclose a method for forwarding packet-

based traffic through a network node comprising:

dedicating a group of queues in a network node to a customer (see paragraph

24, lines 7 – 8, 11 – 15);

performing queue-specific rate shaping on the customer's traffic according to

queue-specific bandwidth limitations respectively associated with the queues (see

paragraph 25, lines 1 – 3, Figure 6, Box 50 Bandwidth Allocation Table, wherein queue

–specific credit allocation request limitation corresponds to queue-specific bandwidth

limitations) and

performing group-specific rate shaping on the customer's traffic according to a

group-specific bandwidth limitation associated with the group of queues (see paragraph

30, lines 1 – 13).

Bly et al. do not disclose a method comprising: receiving a traffic type bandwidth

limitation from the customer; translating the traffic type bandwidth limitation to a queue-

specific bandwidth limitation of the respective queue-specific bandwidth limitations. The

invention of Agrawal et al. from the same or similar endeavor disclose a method

comprising: receiving a traffic type bandwidth limitation from the customer (see

paragraphs 9, 13, 39, and 73, customers contract with the service provider with Service

Level Agreements (SLA), wherein SLA corresponds to traffic type bandwidth limitation);

translating the traffic type bandwidth limitation to a queue-specific bandwidth limitation

of the respective queue-specific bandwidth limitations (see Figure 3, paragraphs 9, 13,

50-56 and 73, the various customers using the network enter into SLAs with the service

provider for various classes of service and bandwidths for the customer's data traffic,

wherein a queue is assigned for each class of service, see Figure 3 reference numerals

83/84).

   Thus, it would have been obvious to the person of ordinary skill in the art at the

time of the invention to implement a method comprising: receiving a traffic type

bandwidth limitation from the customer; translating the traffic type bandwidth limitation

to a queue-specific bandwidth limitation of the respective queue-specific bandwidth

limitations as taught by Agrawal et al. into the method of Bly et al.

   The motivation for implementing a method comprising: receiving a traffic type

bandwidth limitation from the customer; translating the traffic type bandwidth limitation

to a queue-specific bandwidth limitation of the respective queue-specific bandwidth

limitations is that it increases efficiency of the method.

   Regarding claim 2, Bly et al. disclose a method for associating queues from the

group of queues with different types of traffic that are to be received from the customer

(see paragraph 24, lines 1- 4);

   regarding claim 4, associating the group of queues with a group rate shaper

that performs the group-specific rate shaping on the customer's traffic on an aggregate

basis (see paragraph 21, line 11 – 13, wherein the burst group manager corresponds to

a group rate shaper, paragraph 30, lines 1 – 13);

     regarding claim 5, prioritizing the queues of the group of queues (see paragraph 38, lines 9 – 13, paragraph 39, lines 1- 6);

     regarding claim 6, distributing the portion of excess unused bandwidth among the group of queues on a priority basis according to the prioritizing (see paragraph 39, lines 6 – 14);

     regarding claim 7, scheduling packets for forwarding from one or more of the queues in the group queues (see paragraph 27, lines 5 – 8), wherein bandwidth consumed by the packets from each of the queues is equal to respective queue-specific bandwidth limitations for the queues (see paragraph 30, lines 5 – 8); identifying excess unused bandwidth when the consumed bandwidth is less than the group-specific bandwidth limitation (see paragraph 39, lines 6 – 10, wherein listing a queue with maximum request value at the end of the Bandwidth Allocation Table corresponds to identifying excess unused bandwidth); and distributing a portion of the excess unused bandwidth to a first queue of the group of queues (see paragraph 39, lines 6 – 12), wherein the sum of the consumed bandwidth and the portion of the excess unused bandwidth is equal to a group-specific bandwidth limitation for the group (see paragraph 39, lines 10 – 13, wherein line 11, the phrase "allow queue 44 to have whatever is left over" implies the sum of the consumed bandwidth and the portion of the excess unused bandwidth is equal to a group-specific bandwidth limitation for the group);

     regarding claim 16, prioritizing the traffic channels relative to one another (see paragraph 38, lines 9 – 13, paragraph 39, lines 1- 6);

regarding claim 17, the performing traffic-type-specific rate shaping consumes less bandwidth than the customer-specific bandwidth limitation (see paragraph 30, lines 1 – 13), the method further comprising:

identifying excess unused bandwidth following the traffic-type-specific rate shaping; and distributing the excess unused bandwidth to a subset of the traffic channels in priority order according to the prioritizing (see paragraph 39, lines 6 – 14);

regarding claim 18, associating a traffic type with each traffic channel (see paragraph 24, lines 1 – 4);

regarding claim 19, adjusting the traffic-type-specific rate shaping according to traffic type-specific rate shaping customer preferences (see paragraph 25, lines 1 – 3, paragraph 29, lines 10 – 13).

6.   Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bly et al. in view of Agrawal et al. as applied to claim 15 above, and further in view of Aatresh (US 6,067,301).

Regarding claim 20, Bly et al. disclosed, regarding claim 20, all the subject matter of the claimed invention as recited in paragraph 5 of this office action.

Bly et al. fail to teach associating respective traffic-type-specific bandwidth limitations with each traffic channel such that a sum of the respective traffic-type-specific bandwidth limitations is less than or equal to the customer-specific bandwidth limitation as recited in claim 20.

Aatresh from the same or similar field of endeavors teach associating respective traffic-type-specific bandwidth limitations with each traffic channel such that a sum of the respective traffic-type-specific bandwidth limitations is equal to the customer-specific bandwidth limitation (see column 7, lines 33 – 38, wherein the total data link bandwidth corresponds to the customer-specific bandwidth limitation) as recited in claim 20.

Thus, it would have been obvious to a person of ordinary skill in the art at the time of the invention to use associating respective traffic-type-specific bandwidth limitations with each traffic channel such that a sum of the respective traffic-type-specific bandwidth limitations is less than or equal to the customer-specific bandwidth limitation as recited in claim 20 in the method taught by Bly et al. in order to fully utilize the available bandwidth.

Allowable Subject Matter

7.   Claims 8-10 and 14 are allowed.

Response to Arguments

8.   Applicant's arguments filed 4/29/2008 have been fully considered but they are not persuasive.

On page 2 of the Remarks, the Applicant submits that there is no clear articulation of a reason. The Examiner respectfully disagrees. The Examiner has cited that the motivation for implementing a method comprising: receiving a traffic type bandwidth limitation from the customer; translating the traffic type bandwidth limitation

to a queue-specific bandwidth limitation of the respective queue-specific bandwidth limitations is that it increases efficiency of the method. Agrawal et al. discloses that the algorithms allow customer A to use more of the queue space than customer B before congestion controlling customer A's packets. In such a case, the packet flows are aggregated, and thus managed, on a per customer basis (see paragraph 13), which increases the efficiency of the method.

On page 3 of the Remarks, the Applicant submits that Agrawal does not teach "receiving a traffic type bandwidth limitation from a customer. The Examiner respectfully disagrees. Agrawal discloses that the traffic flows are given various priority levels depending upon the customer's Service Level Agreement (see paragraph 3) and, also, customer A may have contracted with the service provider for a bandwidth allocation larger than the allocation for customer B (see paragraphs 13 and 73). Therefore, Agrawal inherently teaches "receiving a traffic type bandwidth limitation from a customer" because the service provider receives a contract from customer A for larger bandwidth allocation than customer B.

Thus, in view of the above reasoning, the Examiner believes the rejections should be sustained.

Conclusion

9.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

than SIX MONTHS from the mailing date of this final action.

10.   **Examiner's Note**: Examiner has cited particular columns and line numbers in the

references applied to the claims above for the convenience of the applicant. Although

the specified citations are representative of the teachings of the art and are applied to

specific limitations within the individual claim, other passages and figures may apply as

well. It is respectfully requested from the applicant in preparing responses, to fully

consider the references in entirety as potentially teaching all or part of the claimed

invention, as well as the context of the passage as taught by the prior art or disclosed

by the Examiner.

In the case of amending the claimed invention, Applicant is respectfully

requested to indicate the portion(s) of the specification which dictate(s) the structure

relied on for proper interpretation and also to verify and ascertain the metes and bounds

of the claimed invent

11.   Any inquiry concerning this communication or earlier communications from the examiner should be directed to PAO SINKANTARAKORN whose telephone number is (571)270-1424. The examiner can normally be reached on Monday-Thursday 9:00am-3:00pm EST.

    If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ricky Ngo can be reached on 571-272-3139. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

    Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Pao Sinkantarakorn/   /Ricky Ngo/
Examiner, Art Unit 2616   Supervisory Patent Examiner, Art
                                                   Unit 2616

PS